Amendment to the Claims

This listing of Claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) An etchant fume exhaust apparatus installed inside an etching system, the etching system including an etchant supply apparatus, wherein the etchant fume exhaust apparatus comprises:

an exhaust hole that provides a passage to discharge gaseous etchant generated from the etchant supply apparatus in the etching system;

an exhaust plate disposed to collect liquefied etchant from the exhaust hole;

a support part that fixes the exhaust plate to the exhaust hole and extends into the inside of the exhaust hole, the exhaust plate suspended from the exhaust hole by the support part, the support part disposed such that substantially all of an entire outer surface of the support part is exposed to the gaseous etchant; and

an exhaust line connected with the exhaust plate and through which the liquefied etchant in the exhaust plate is removed from the exhaust plate,

wherein a width of an opening formed by a first end of an upper surface of the exhaust plate most proximate to the exhaust hole is larger than a width of the support part most distal from the exhaust hole.

2. (Original) The etchant fume exhaust apparatus of claim 1, wherein the exhaust hole has a hollow cylindrical shape.

3. (Previously Presented) The etchant fume exhaust apparatus of claim 1, wherein the upper surface of the exhaust plate is formed such that the width of the

opening formed by the first end of the upper surface most proximate to the exhaust hole is larger than a width of an opening formed by a second end of the upper surface most distal from the exhaust hole.

4. (Original) The etchant fume exhaust apparatus of claim 3, wherein a slope of the upper surface of the exhaust plate is constant between the first and second ends of the upper surface.

5. (Original) The etchant fume exhaust apparatus of claim 1, wherein a space between the exhaust hole and the exhaust plate provides a route through which the gaseous etchant generated in the etching system is induced into the exhaust hole.

6. (Previously Presented) The etchant fume exhaust apparatus of claim 1, wherein the support part is formed in a substantially frustoconical shape in which a width of the support part most proximate to the exhaust hole is smaller than the width of the support part most distal from the exhaust hole.

7. (Original) The etchant fume exhaust apparatus of claim 1, wherein the exhaust line is disposed such that liquefied etchant in the exhaust line is removed from the exhaust apparatus.

8. (Previously Presented) The etchant fume exhaust apparatus of claim 1, wherein the exhaust line is disposed such that liquefied etchant in the exhaust line is reused in the etching system.

9. (Currently Amended) An etching system comprising:

an etchant supply apparatus that supplies etchant;

an etchant fume exhaust apparatus disposed in an upper portion of the etchant supply apparatus, the etchant fume exhaust apparatus comprising an exhaust hole that provides a passage to discharge gaseous etchant, an exhaust plate disposed to collect the gaseous etchant that has condensed into a liquefied etchant and that is dripping from the exhaust hole, a support part that fixes the exhaust plate to the exhaust hole and extends into the inside of the exhaust hole, the exhaust plate suspended from the exhaust hole by the support part, and an exhaust line connected to the exhaust plate and removes the liquefied etchant collected in the exhaust plate, wherein a width of an opening formed by a first end of an upper surface of the exhaust plate most proximate to the exhaust hole is larger than a width of the support part most distal from the exhaust hole; and

a chamber in which etching occurs using the etchant supplied from the etchant supply apparatus.

10. (Original) The etching system of claim 9, wherein the exhaust hole has a hollow cylindrical shape.

11. (Previously Presented) The etching system of claim 9, wherein the upper surface of the exhaust plate is formed such that the width of the opening formed by the first end of the upper surface most proximate to the exhaust hole is larger than a width of an opening formed by a second end of the upper surface most distal from the exhaust hole.

12. (Previously Presented) The etching system of claim 11, wherein a slope of the upper surface of the exhaust plate is constant between the first and second ends of the upper surface.

13. (Previously Presented) The etching system of claim 9, wherein a space between the exhaust hole and the exhaust plate provides a route through which the gaseous etchant generated in the etching system is induced into the exhaust hole.

14. (Previously Presented) The etching system of claim 9, wherein the support part is formed in a substantially frustoconical shape in which a width of the support part most proximate to the exhaust hole is smaller than the width of the support part most distal from the exhaust hole.

15. (Previously Presented) The etching system of claim 9, wherein the exhaust line is disposed such that the liquefied etchant in the exhaust line is removed from the exhaust apparatus.

16. (Previously Presented) The etching system of claim 9, wherein the exhaust line is disposed such that the liquefied etchant in the exhaust line is reused the etching system.

17-25. (Canceled)

26. (Previously Presented) The etchant fume exhaust apparatus of claim 1, wherein the support part, the exhaust plate, and the exhaust hole are formed from material that resists corrosion by the etchant.

27. (Previously Presented) The etching system of claim 9, wherein the support part, the exhaust plate, and the exhaust hole are formed from material that resists corrosion by the etchant.

28. (Previously Presented) The etching system of claim 9, wherein the support part is disposed such that substantially all of an entire outer surface of the support part is exposed to the etchant.

29. (Previously Presented) The etching system of claim 9, wherein the support part contacts the upper surface of the exhaust plate

30. (Currently Amended) An etchant fume exhaust apparatus installed inside an etching system, the etchant fume exhaust apparatus comprising:

an exhaust hole that provides a passage to discharge gaseous etchant generated in the etching system by an etchant supply tank;

an exhaust plate disposed to collect liquefied etchant from the exhaust hole;

a support part that fixes the exhaust plate to the exhaust hole and contacts an upper surface of the exhaust plate wherein the upper surface is tapered and extends into the inside of the exhaust hole, the exhaust plate suspended from the exhaust hole by the support part; and

an exhaust line connected with the exhaust plate and through which the liquefied etchant in the exhaust plate is removed from the exhaust plate,

wherein a width of an opening formed by a first end of the upper surface of the exhaust plate most proximate to the exhaust hole is larger than a width of the support part most distal from the exhaust hole.

31. (Previously Presented) The etchant fume exhaust apparatus of claim 30, wherein the support part, the exhaust plate, and the exhaust hole are formed from material that resists corrosion by the etchant.

32. (Previously Presented) The etchant fume exhaust apparatus of claim 30, wherein the support part increases in width of the support part towards the exhaust plate.

33. (Previously Presented) The etchant fume exhaust apparatus of claim 32, wherein the support part tapers continuously along the entire length of the support part.

34. (Previously Presented) The etchant fume exhaust apparatus of claim 30, wherein the upper surface of the exhaust plate tapers towards a center of the exhaust plate.

35. (Previously Presented) The etchant fume exhaust apparatus of claim 34, wherein the upper surface of the exhaust plate tapers continuously along the entire length of the upper surface.

36. (Previously Presented) The etchant fume exhaust apparatus of claim 30, wherein the upper surface of the exhaust plate tapers towards a center of the exhaust plate.

37. (Previously Presented) The etchant fume exhaust apparatus of claim 30, wherein the support part is disposed such that substantially all of an entire outer surface of the support part is exposed to the etchant.